

Date: Thu, 15 Apr 93 04:30:21 PDT  
From: Ham-Policy Mailing List and Newsgroup <ham-policy@ucsd.edu>  
Errors-To: Ham-Policy-Errors@UCSD.Edu  
Reply-To: Ham-Policy@UCSD.Edu  
Precedence: Bulk  
Subject: Ham-Policy Digest V93 #97  
To: Ham-Policy

Ham-Policy Digest                      Thu, 15 Apr 93                      Volume 93 : Issue    97

Today's Topics:

                    1500 watts too much? (5 msgs)  
    EME absolutely needs 1500 watts? (was Re: 1500 watts too much?)  
                    Let each determine their own incentive!  
                    Remote control ATV

Send Replies or notes for publication to: <Ham-Policy@UCSD.Edu>  
Send subscription requests to: <Ham-Policy-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Policy Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-policy".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

-----

Date: 14 Apr 93 19:21:07 GMT  
From: news.cerf.net!pagesat!olivea!spool.mu.edu!uwm.edu!linac!uchinews!raistlin!  
timbuk.cray.com!hemlock.cray.com!cherry10!dadams@network.UCSD.EDU  
Subject: 1500 watts too much?  
To: ham-policy@ucsd.edu

In article 1374@arrl.org, jbbloom@arrl.org (Jon Bloom) writes:  
|On what basis do you consider the 60-Hz fields from his consumer  
|equipment more "disruptive" than your transmission? The 60-Hz field  
|isn't materially interfering with the operation of his other  
|appliances (e.g., TV), so clearly interfering RF signals are more  
|disruptive on that basis, regardless of who's at fault.  
|  
|If, on the other hand, you are talking about biological effects, I'd  
|like a pointer to the research that leads to your conclusion. I'm not  
|aware that the existing science on the effects of either 60-Hz or  
low-level RF fields supports such a general statement.

Last year all the media was ablaze over this study that had been done wherein it was claimed that children who lived and grew up near high tension power lines were more likely to get leukemia than those who did not.

(IMHO the study was flawed from the beginning, but it really had the media going.)

---

--David C. Adams Statistician Cray Research Inc. dadams@cray.com

Passionate about Bach.

When the hunger for liberty destroys order,  
then the hunger for order will destroy liberty.

-----

Date: 14 Apr 93 21:50:00 GMT  
From: ogicse!uwm.edu!zaphod.mps.ohio-state.edu!ub!acsu.buffalo.edu!  
ubvmsd.cc.buffalo.edu!v111qheg@network.UCSD.EDU  
Subject: 1500 watts too much?  
To: ham-policy@ucsd.edu

In article <1374@arrrl.org>, jbbloom@arrrl.org (Jon Bloom) writes...  
>In rec.radio.amateur.policy, v111qheg@ubvmsb.cc.buffalo.edu (P.VASILION) writes:  
>>In article <1993Apr13.185928.1297@qualcomm.com>, karn@servo.qualcomm.com  
writes...  
>>>In article <C5FKtp.IyI@athena.cs.uga.edu>, mcovingt@aisun3.ai.uga.edu (Michael  
Covington) writes:  
>>>|> In short, QRO ham transmitters aren't the source of the strongest fields  
>>>|> that consumer gear has to endure, anyway.  
>>>  
>>>Is this really true? Sure, other consumer RF transmitters might cause  
>>>RFI, but because of their lower power levels (the legal ones, anyway)  
>>>the interference is more likely to be limited to the user's own TV or  
>>>stereo. While RFI is always objectionable, interfering only with your  
>>>own equipment is arguably much less of a public policy issue than  
>>>interfering with your neighbor.  
>>  
>> Like I said in my post, my 1.5 KW E and H field radiation from  
>>my 4 element monobander at 70 feet is far far less disruptive to my  
>>next door neighbor who is 100 feet away from the antenna than the 60 cycle  
>>AC his electric heater or his television set gives off. Don't for get that  
>>unless you run AM, your 1.5KW is NONCONTINUOUS! My CW QSO with Bovet lasts  
>>about 3 - 5 seconds. His viewing of TV lasts for hours.  
>  
>On what basis do you consider the 60-Hz fields from his consumer  
>equipment more "disruptive" than your transmission? The 60-Hz field

>isn't materially interfering with the operation of his other  
>appliances (e.g., TV), so clearly interfering RF signals are more  
>disruptive on that basis, regardless of who's at fault.

Materially, the transmissions will be more disruptive than 60Hz,  
HOWEVER, if you use goof filtering and a good amplifier (alpha 87 comes to  
mind) you should not have to worry about harmonics and spurious transmissions.

>If, on the other hand, you are talking about biological effects, I'd  
>like a pointer to the research that leads to your conclusion. I'm not  
>aware that the existing science on the effects of either 60-Hz or  
>low-level RF fields supports such a general statement.

I'm not going to break the 1st rule of USENET and go looking up  
every reference, as my time is limited, however several recent studies have  
shown that constant 60Hz electromagnetic fields have potential to do nasty  
things and cause a host of nasty disorders (lukemia et al.). ONE source I  
might direct you to last years book that had a couple pages on EMI and such.  
I recal it stated that 60Hz was much more of a concern as RF. You might also  
want to check with KN2M, this division's expert on biological effects of  
RF and EM radiation.

Peter Vasilion, KB2NMV  
KN2M's Contest Crew  
Western NY DX Assoc.

-----  
Date: Thu, 15 Apr 1993 04:11:14 GMT  
From: qualcom.qualcomm.com!servo.qualcomm.com!karn@network.UCSD.EDU  
Subject: 1500 watts too much?  
To: ham-policy@ucsd.edu

In article <1993Apr14.142107.8232@hemlock.cray.com> dadams@cray.com writes:  
>Last year all the media was ablaze over this study that had been done  
>wherein it was claimed that children who lived and grew up near high tension  
>power lines were more likely to get lukemia than those who did not.

The media is still ablaze over this issue, at least here in San Diego.  
A couple is currently suing San Diego Gas and Electric for their power  
lines having caused their daughter's cancer.

And unless you've been under a rock for the past six months, I'm sure  
you've heard by now about the "brain cancer caused by cell phone"  
case.

We are seeing first hand the real costs of a totally inadequate US  
educational system.

Phil

-----  
Date: Wed, 14 Apr 1993 17:37:09 GMT  
From: usc!zaphod.mps.ohio-state.edu!saimiri.primate.wisc.edu!  
usenet.coe.montana.edu!news.u.washington.edu!spiff.seattleu.edu!thebes!ole!ssc!  
markz@network.UCSD.EDU  
Subject: 1500 watts too much?  
To: ham-policy@ucsd.edu

Michael Covington (mcovingt@aisun3.ai.uga.edu) wrote:

: ...  
: (2) Reducing ham power limits by any \_reasonable\_ amount (like a factor  
: of 10) would have little effect on the susceptibility problem. After  
: all, you can get very strong fields from cellular phones, CBs, etc., and  
: other \_low-power\_ devices that are commonly used \_close\_ to TVs and  
: stereos. They are the real problem.  
:  
: In short, QRO ham transmitters aren't the source of the strongest fields  
: that consumer gear has to endure, anyway.

Previous postings about the RF design letter said that the author  
suggested that the power levels be dropped by a factor of 100.

What does it really say?

Mark Zenier markz@ssc.wa.com markz@ssc.com

-----  
Date: Wed, 14 Apr 1993 14:18:11 GMT  
From: sdd.hp.com!zaphod.mps.ohio-state.edu!darwin.sura.net!knuth.mtsu.edu!raider!  
theporch!jackatak!jackhill@network.UCSD.EDU  
Subject: 1500 watts too much?  
To: ham-policy@ucsd.edu

karn@unix.ka9q.ampr.org (Phil Karn) writes:

> Sure, some broadcast stations run far more power, but they are far  
> less numerous and are rarely sited quite as close to houses as are  
> amateur transmitters.

I guess you don't live near any metropolitan area. Any transmitter in  
a medium or larger metro area that has been in place for more than 10  
or 20 years (and for braodcasters, 1973, 20 years ago, is real recent)  
has had its once secluded "boonies" location surrounded by housing

developments.

All up and down the eastern Megalopolitan Corridor, housing developments swarm around broadcast towers.

Here in Nashville, WSM, Home of the Grand Ol Opry, 650AM (50,000 watts clear channel) has a huge stacked pyramid antenna, specifically designed to drive the signal down for broader groundwave, was once in a deserted field way away from town. Now it sits, completely surrounded by housing developments and right across the street from an elementary school!

I don't know about your consumer electronics, but 50,000 watts at close range with that 5/8 stick (I said it was \*HUGE\*! ;^) makes for some fun times!

73

```
+-----+
| Jack GF Hill      |Voice: (615) 459-2636 - Bicycling and SCUBA Diving |
| P. O. Box 1685    |Modem: (615) 377-5980 -          Compu$erve 76427,31 |
| Brentwood, TN 37024|jackhill@jackatak.raider.net -      Ham Call: W4PPT |
+-----+
```

-----  
Date: 14 Apr 93 23:23:11

From: sun-barr!news2me.EBay.Sun.COM!exodus.Eng.Sun.COM!appserv.Eng.Sun.COM!  
appserv!rfm@decwrl.dec.com

Subject: EME absolutely needs 1500 watts? (was Re: 1500 watts too much?)

To: ham-policy@ucsd.edu

In article <-LVV5J0XZ@linac.fnal.gov> carlson@linac.fnal.gov (Kermit Carlson)  
writes:

    You of course are telling me that my running 1.5K for EME is wrong...  
    p.s. care to include EME as legitimate use of power?

As far as I know the figure of 1500 watts PEP descends from the old 1000 watts input-to-the-final standard, which was picked as a reasonably round number via the Three Bears algorithm (10kW? Too Hot! 100W? Too Cold! 1kW? Just Right!) long before EME was worked on. Was it just a lucky coincidence that the right power level for running EME was picked as the limit, or could it be that if the limit had been, say, 500 watts everybody would have just figured out how to add 3dB gain to their EME antenna arrays and made it work anyway?

(I considered redirecting followups back to .misc since this now has technical content, but decided against it.)

--

Rich McAllister (rfm@eng.sun.com)

-----  
Date: Wed, 14 Apr 1993 13:53:25 GMT  
From: swrinde!zaphod.mps.ohio-state.edu!darwin.sura.net!knuth.mtsu.edu!raider!  
theporch!jackatak!jackhill@network.UCSD.EDU  
Subject: Let each determine their own incentive!  
To: ham-policy@ucsd.edu

little@nuts2u.enet.dec.com (nuts2u::little) writes:

> jackhill@jackatak.raider.net (Jack GF Hill) writes:

> >It is \*NOT\* "forced" on you, and since the HF spectrum is only 2% of  
> >the total, why must everyone feel cheated because they do not want to  
> >learn the Morse?

> It \*IS\* forced on you to access 100% of the HF bands. The fact that the  
> HF bands only represent 2% is meaningless for several reasons. One is  
> that the propogation aspects of the HF bands is significantly different  
> than the VHF and above bands.

I can not argue or quarrel with your assertion that HF propogation is  
vastly different from VHF, UHF or above. I assume you have used your  
amateur privileges for more than just tooling around in your rolling  
faraday sheild yakking through a repeater with a brick and rubber  
duckie. If so, then you would know that EACH band has propogation  
characterstics quite different from the others. However, because the  
propogation characteristics are so different, even between 50MHz and  
up bands, your argument loses most of its impact. Try weak signal...  
try moon bounce (it will NOT work on HF!) try SSB probing for  
SporadicE. Play radio and stop whining!

> Second, using your argument, the HF bands

> represent 0% of the amateur allocations, since we have access to  
> everything above 300 GHz.

OK, so what are you bitching about then? If statistically you have  
access to all the allocations and 0% represents HF, you are not being  
cut out of anything! If you want to play on HF, and I get the very  
strong sense you do, please, let me try to help you with the CW  
requirement. Teaching methods and old habits may be preventing you  
from enjoying a part of the hobby, and your desire to have HF access  
means, under the current rule structure, that you \*will\* pass a CW  
test, or remain at 50Mhz and above. Treaty and International  
agreements and FCC rules require Morse proficiency, and until that is  
changed (and unless something very different in the way of examination  
mechanisms sprouts up, and I doubt it will, simply removing the  
requirement will cause more problems than it solves.

> Third is that due to the current stagnation in  
> amateur radio, most of the activity in the amateur bands occurs in the HF  
> bands. Although there is some VHF/UHF activity outside repeater operation,  
> it doesn't amount to a lot.

BZZZZZZZZZZZZT! Where are you playing radio? Even in Nashville, which has some really arcane repeaters and more Old Farts per square meter than most places (coupled with hundreds of victims of a repeater war from 10 years ago) there is a bunch of activity: 50Mhz (yeah, we have a channel two, but nobody messes it up much) is busy and several locals are installing mobile rigs because 144Mhz is too busy; 222Mhz (which is CHannel 24 on the CATV for the others lurking about) has a variety of activity, though nowhere near as much as I'd have suspected (and probably is why UPS got the bottom 2 Mhz); 440 is real active and so on up the band. ATV, SSB, CW (yep, even on VHF -- a small piece of flame bait -- but as a confirmed CW-hater, how would you know? ;^)  
Since 100% of the US Hams have access to VHF/UHF, I think your figures are real badly skewed, because 50Mhz and up has at least 100 times the activity as HF. Use your vast knowledge of propogation and figure 3-5Khz for a SSB QSO and 1Khz for CW and then figure maximum density of all HF bands at once and it a) doesn't work that way, and b) still is less than VHF/UHF etc...

> PS Your generalizations are like all bigoted views, groundless and only  
> justified by looking through your tinted glasses.

Hmmmm. Guess what good for you (bashing me and calling me a bigot with "groundless views") is OK, but when one tries to introduce fact and reason, and even offers to help you with what must have become a very frustrating problem, it is still OK for you to point your finger and yell "bigot! Old Fart! Tinted Glasses!" -- been a long time since I was called "Four-eyes" in an argument! ;^)

Offer still stands.

73

```
+-----+
| Jack GF Hill      |Voice: (615) 459-2636 - Bicycling and SCUBA Diving |
| P. O. Box 1685    |Modem: (615) 377-5980 - Compu$erve 76427,31 |
| Brentwood, TN 37024|jackhill@jackatak.raider.net - Ham Call: W4PPT |
+-----+
```

-----  
Date: 14 Apr 93 06:43:05 -0700

From: swrinde!gatech!asuvax!ennews!telesys!wierius!gedphx!b19517@network.UCSD.EDU

Subject: Remote control ATV

To: ham-policy@ucsd.edu

In article <1993Apr12.153317.6597@b8.b8.ingr.com>, ldfrost@ldf.b24a.ingr.com (ldf) writes:

> In article <186072@pyramid.pyramid.com>, andrem@pyrtech.mis.pyramid.com (Andre Molyneux) writes:

> |>

> |> I have a question regarding the ATV transmissions and whether or not  
> |> they can legally be controlled remotely. I'm a member of the  
> |> Nor-Cal Shelby club, and am hoping to set up an in-car camera at  
> |> one of the upcoming open-track events. I will not be the driver of  
> |> the car, and was wondering if it would be legal to have a camera  
> |> broadcasting from a car that didn't have a licensed amateur in it as  
> |> long as I retained control remotely.

> |>

>

> stuff deleted.

>

```
> |> | Andre Molyneux    KA7WVV      "Insert your favorite disclaimer here"      |
> |> +-----+-----+-----+-----+-----+-----+-----+-----+-----+
> |> |      -=----- PYRAMID TECHNOLOGY CORP |Internet:      |
> |> |      ----- 3860 N. First Street      | andrem@pyramid.com      |
> |> |      ----- San Jose, CA 95134        |Packet:      |
> |> |----- (408) 428-8229                    | ka7wvv@n0ary.#nocal.ca.usa.na |
> |> +-----+-----+-----+-----+-----+-----+-----+-----+-----+
>
```

> I don't see why this should be illegal. It's just like the local ATVers here  
> in Huntsville, AL have a remote camera mounted on Montesano mountain overlooking  
> the city that is remotely controlled. In your case, the driver of the car is  
> not the control operator. He's not operating the transmitter; he's driving the  
> car.

>

> Have fun! After all, thats part of what Amateur radio is all about....

>

>

```
> Larry  |^^^^^^|
>      (|o) (o)|)      Kilo Delta Four Yankee Delta Golf...at y'er service
> ===!!!=====U=====!!!=====
```

>

```
>      Larry D. Frost
>      AE EE Application Support    ingr!b24a!ldf!larry
>      (205)730-8425                larry@ldf.b24a.ingr.com
```

>

```
>      Intergraph Corporation, Huntsville, AL 35894-0001
```

```
> =====
```

No problem at all! This last spring in Phoenix we had three cars with ATV in the electric car race. WE did put controller boards in each car and had a call sign for each car. We used three different bands too (440,1200,& 900). Anyway it worked quite well and it was neat having video in each car when all three



raced in the same race. So go for it and enjoy it!

--

73 Larry N7NOU

Larry L. Dillie Allied-Signal Aerospace, Garrett Engine Division, Phoenix, AZ  
Aeronet: GED::ASBT01::B19517 Internet: b19517@asbt01.gedlab.allied.com  
UUCP: ...!{hrc|mcdphx|asuvax}!gedphx!decnet!asbt01!b19517

-----  
Date: 15 Apr 1993 01:55:41 GMT  
From: cronkite.cisco.com!dstine@ames.arpa  
To: ham-policy@ucsd.edu

References <C5ECqK.Hr3@athena.cs.uga.edu>,  
<Apr13.144109.55012@yuma.ACNS.ColoState.EDU>, <11948@prijat.cs.uofs.edu>  
Subject : Re: 1500 watts too much?

In article <11948@prijat.cs.uofs.edu> bill@triangle.cs.uofs.edu (Bill Gunshannon) writes:

>In article <Apr13.144109.55012@yuma.ACNS.ColoState.EDU>,  
galen@picea.CFNR.ColoState.EDU (Galen Watts) writes:

>|>

>|> these kinds of problems wouldn't exist. They don't occur as much in Europe.

>

>Of course, that could also be because Europeans aren't allowed

>to run 1500 watts, too.

You know, I get REALLY tired of hearing this "well, European countries do XYZ, so we should too" twaddle on topics of:

- radio regulations
- socialized medicine
- gun control
- voting regulations and political parties
- tax structures
- general aviation

and on and on and on.

For all those who think that Europe is just so hot and dandy in the way they do things, I offer the following suggestion:

Emigrate.

That's right. Pick up and go there. It really is much simpler to do this rather than change everything in the US to be "just like Europe."

That might seem rather harse of me, but this is the US of A folks. We're

not like Europe. They have a population density in most continental countries which is only approached in places like NJ, NYC and SF.

Why should a ham in the middle of the sticks be burdened with regulations designed for European urban areas? To do so seems to be the penultimate in silly reasoning to me.

As for the previous issue of "what justification is there for 1500 watts for a hobby?" I offer the following:

- Because EME loss path requires that level of power.
- Because when 20 and 15 meter paths become marginal, I need to.
- Because when I want to rise above all the twerps splattering the band with their speech processors I need to.
- Because when you're working 6M sporadic/tropo or 2/70cm meteor work, you need it.
- because when you're trying to work HF thru an aurora, it is quite useful.

Is it any co-incidence that the tropo/EME/meteor records are regularly set by American operators? I don't think so.

This whole issue is yet another thinly veiled attempt by the EIA and friends to get laws passed to their benefit, just as they did with cellular phones and scanners.

Given the FCC's enforcement budget, they could pass laws stipulating a maximum power limit of 100W DC input power. And it wouldn't do squat. Look at 27MHz: there are people there running Henry 4K amps in grand style. There are hams here and there running 10KW amps into 6 element beams. Laws don't prevent anyone from doing anything. Laws are simply words on pieces of paper which give law enforcement agencies the jurisdiction to fine/imprison you if they catch you exceeding the limits proscribed by said words. To think that passing a law limiting power levels to 500W or 100W is going to eradicate TVI/RFI is yet more twaddle with no basis in fact.

When I was young and running from 10 to 500 W DC input and had zepp-fed wire antennas of all sorts, I was blamed for EMI which in fact was caused by everything from Mixmasters (a popular cake mixer of the day) to lightning storms. I was blamed for EMI when I wasn't even in town. Given the slightest provocation, most consumer devices fold up and go south at the slightest hint of EMI or front-end overload. With the proliferation of computers, wireless lans, Part 15 devices and such, I think EMI prevention is incumbent upon the manufactures, simply because that is the environment into which they are selling their products.

dsa

-----

End of Ham-Policy Digest V93 #97

\*\*\*\*\*